

5.0 - Contractor/Guest ES&H Guidelines

5.1.0 Contractor Management Systems

5.1.0.0 General Requirements

- a. Contractors shall have a written safety and health policy that includes the following elements:

1) Management Commitment and Employee Involvement

- A. Written policy
- B. Establish and communicate goals and objectives
- C. Provide for top management visibility
- D. Provide for employee involvement
- E. Assign and communicate responsibilities
- F. Provide authority and resources
- G. Hold all personnel accountable
- H. Review program versus goals and objectives annually

2) Work Location Analysis

- A. Conduct comprehensive baseline surveys/audits for safety and health, and update at regular intervals
- B. Analyze planned and new facilities, materials and equipment
- C. Perform routine job hazard analyses
- D. Perform regular inspections
- E. Provide employee suggestion system
- F. Provide for investigations of accidents, incidents and near misses
- G. Analyze injury and illness trends

3) Hazard Prevention and Control

- A. Engineering techniques
- B. Procedures for safe work
- C. Provisions for personal protective equipment
- D. Administrative controls

- E. Preventative maintenance
- F. Emergency planning
- G. Medical program

4) Safety and Health Training

- A. Ensure that employees understand hazards and how to protect themselves
- B. Supervisors analyze for hazards
- C. Maintain physical protection
- D. Reinforce training
- E. Ensure that management understands responsibilities
- F. Maintain records of employees training and safety meetings

b. Contractors' managers shall provide management systems that involve planning to meet or exceed governmental and Solutia requirements.

- 1) Contractor management systems shall be documented, including all reviews and revisions.
- 2) Contractors shall conduct periodic self-audits of their management systems to assure continuous improvement.

c. Revisions of and changes in contractor safety policies shall be reviewed with the Solutia Representative. Contractors shall provide, when specified by the Solutia Representative.

d. Contractors shall provide, when specified by the Solutia Representative, the services of a full-time safety representative.

e. Contractors' safety representatives shall:

- 1) As a minimum, be certified as having taken the 30-Hour OSHA Construction Standards Course, or equivalent.
- 2) Manage the contractor's project safety program and will interface directly with the CMR.
- 3) Report directly to the contractor's corporate safety manager.
- 4) Have the authority to correct any hazard or unsafe practice on the project, even if a work stoppage is required.

f. The selection of a contractor's safety representative shall be approved by the CMR. Contractors shall provide to the Solutia Representative verification that the selected individual meets all the requirements set forth by Solutia.

- 32) 5.6.6, "LABORATORY SAFETY"
- 33) 5.6.7, "LEAD EXPOSURE"
- 34) 5.7.0, "VEHICLE SAFETY"
- 35) 5.7.1, "CRANES AND HOISTING EQUIPMENT"
- 36) 5.7.2, "PILE DRIVING"
- 37) 5.7.3 "MOBILE/POWERED CONSTRUCTION EQUIPMENT"
- 38) 5.8.0, "WASTE MANAGEMENT"

b. Contractors shall maintain records of all employees training.

- 1) Training records shall contain, as a minimum:
 - A. Name and signature of the employee
 - B. Date of training
 - C. Subject and content of the training
 - D. Means used to verify that employee understood the training
 - E. Name of the instructor

c. When requested, the Solutia Representative shall be provided with documentation and certification of contractor employee training.

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5.1.4 English Proficiency

5.1.4.0 General Requirements

- a. The environmental, safety and health process shall be administered in English consistent with the Contractor/Guest Environmental, Safety and Health Policy. Orientation, training, comprehension evaluation, application of environmental, safety and health procedures, such as, work permit procedures, job planning and any other processes or procedures related to working safely are included.
- b. Contractor companies will be expected to staff the work to be done with personnel that can meet this requirement.
- c. If the English deficiency is caused by a physical or mental disability, ADA rules will apply.

5.1.4.1 Application of Requirements to Specific Job Situations

- a. Communication in English is required only when and to the extent necessary to conduct the assigned work safely.
 - 1) Non-safety related activity, such as lunch breaks, are not covered by the requirement.
 - 2) Communication on-the-job in another language is allowed if, for example, all persons directly involved in the work at the time communicate more effectively in that language.
 - 3) The term communication covers the English language skills necessary for the person to receive and understand information, and to deliver information as required by the safety process.
 - 4) Accent and grammar are not a consideration unless these preclude effective communication with others.

Site Requirement *6.1.4

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5.3.0 Houskeeping

5.3.0.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1910.141, "Sanitation", and *1926.25, "Housekeeping".

5.3.0.1 General Requirements

- a. Contractors shall maintain a high standard of housekeeping on the job location at all times as an integral part of the work. The purpose of this requirement is to ensure the safety of all personnel entering the job location and to maintain a condition of housekeeping that is consistent with the desired appearance of a Solutia job location.
- b. The following requirements represent the minimum acceptable standard and level of effort by contractors:
 - 1) Daily clean up of work, fabrication and personnel areas is required.
 - 2) All equipment and construction materials shall be stored in an orderly manner in storage areas as designated by the Solutia Representative.
 - 3) All designated laydown areas utilized for temporary storage of construction materials shall be properly barricaded.
 - 4) If necessary, contractors shall perform grass and weed control within the bounds of the project location, or portion thereof, for which they have control.
 - 5) All scrap construction materials and waste shall be picked up and disposed of at least daily. Debris is to be placed into waste containers provided by the contractor unless otherwise designated by the Solutia Representative. All location procedures for waste disposal shall be followed. See Requirement *5.8.0, "WASTE MANAGEMENT".

- 6) Form wood and other lumber shall be neatly stored when not in use. All nails shall be removed or bent over to prevent puncture wounds.
- 7) Stairways, walkways, ladder cages and scaffolds shall be kept clear of all cords, cables, hoses, materials and anything else that might hinder personnel access.
- 8) Cords, cables and hoses at stairways, walkways and scaffolds shall be supported at least seven feet overhead or laid flat outside of walkways.
- 9) All spills of oil, solvents, chemicals and any regulated liquids shall be reported to the Solutia Representative immediately and shall be properly cleaned up and disposed of. Dumping of these materials into floor drains, sanitary sewers, storm sewers, drainage ditches or other open ground is forbidden. See Requirement *5.8.0, "WASTE MANAGEMENT".
- 10) Contractors shall be responsible for keeping all location roads free from all debris resulting from their performance of the work.
- 11) Storage of combustible and flammable materials shall not be located under overhead pipelines and utilities. See Requirement *5.4.0, "FIRE PROTECTION AND PREVENTION".
- 12) Loose materials on roofs or other overhead structures shall be removed or secured to prevent being blown or bumped off.
- 13) Accumulation of materials that may create a fire hazard shall not be permitted.
- 14) Storage of materials shall be at least eight feet from the center of railroad tracks.

c. Enforcement of these requirements shall be the responsibility of the contractor. Inspections will be conducted by Solutia representatives on a periodic basis.

- 1) When inspections identify conditions which are not in compliance with these requirements, the contractor will be notified in writing, and corrective action will be taken immediately.
- 2) When inspections identify unsatisfactory clean up efforts by contractors, the Solutia Representative may elect to have clean up work performed by others and to backcharge the contractor responsible for clean up.

Site Requirement *6.3.0

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5.0 - Contractor/Guest ES&H Guidelines

5.3.1 Basic Environmental, Safety, and Health Rules

5.3.1.0 Governmental Requirements

- a. Contractors shall comply with all federal, state, county, and municipal or local safety laws bearing on their work.
- b. Contractors shall comply fully with all applicable requirements of the Contract Work Hours and Safety Standards Act and the Occupational Safety and Health Act and the rules and regulations promulgated thereunder. Contractors' attention is specifically directed to 29 CFR, Chapter XVII, Part 1926, "Safety and Health Regulations for Construction", and Part 1910, "General Industry Safety and Health Regulations".

5.3.1.1 Basic Safety Rules

- a. Contractor employees shall be responsible for their actions and the impact their actions have on others. Safety shall be a condition of employment. Rules shall be obeyed, and procedures shall be complied with.
- b. All occupational injuries and illnesses shall be reported to contractor supervision and the Solutia Representative immediately. See Requirement *5.3.5, "INJURY AND ILLNESS RECORDKEEPING AND REPORTING".
- c. Unsafe conditions and activities shall be reported immediately and, when possible, corrected immediately.
- d. Barricades and/or signs shall be placed where necessary to warn against hazardous conditions or activities. See Requirement *5.5.9, "FALL PROTECTION".
- e. Access to emergency equipment, exits, telephones, safety showers, eye-baths, fire extinguishers, alarm boxes, hose houses and other fire fighting equipment shall be maintained at all times. See Requirement *5.4.0, "FIRE PROTECTION AND PREVENTION".
- f. Location operating areas shall be entered only when authorized. See Requirement

***5.4.4, "SECURITY".**

- g. Scaffolds, overhead landings, walkways and catwalks shall be kept free of loose tools and materials. See Requirement *5.3.8, "SCAFFOLDING".
- h. Compressed air shall not be used for blowing dust or dirt from clothing.
- i. Smoking is prohibited except in designated areas.
- j. Horseplay, fighting, gambling, stealing and soliciting are prohibited.
- k. Firearms are prohibited.
- l. Riding construction equipment as a passenger is prohibited. Employees being transported by truck shall sit entirely inside the body of the truck. Riding with legs or arms dangling over the back or side of the truck is not permitted. See Requirement *5.7.0, "VEHICLE SAFETY".
- m. Contractor employees possessing illegal drugs or under the influence of alcohol or illegal drugs are not permitted on plant property, including parking lots. See Requirement *5.9.1, "SUBSTANCE DETECTION".
- n. Employees working near an opening, on elevated steel or in any area where full guardrails are not possible must be provided and wear a full body safety harness and be tied on to an appropriate safe structure. Employees working in an elevated lift basket shall use a full body-harness system. See Requirements *5.3.2, "PERSONAL PROTECTIVE EQUIPMENT", and *5.5.8, "AERIAL LIFTS".
- o. Basic dress, grooming and personnel protective equipment requirements for areas other than offices are defined below: [See Requirement *5.3.2, "PERSONAL PROTECTIVE EQUIPMENT"]
 - 1) Clothing shall be free of loose hanging and ragged ends.
 - 2) Long pants are required. Dresses or skirts are allowed in designated areas only.
 - 3) Sleeveless shirts are prohibited.
 - 4) Steel-toed safety shoes/boots which are made of non-porous material, preferably sturdy leather, are required. Note: Steel-toed safety shoes are not required when the work is exclusively office work.
 - 5) Applicable personal protective equipment requirements for safety glasses, specialized eye protection, hard hats, hearing protection, etc.,

shall be followed.

- 6) Personnel who must wear a respirator shall be clean shaven in the seal area of the respirator. Beards and long moustaches may be prohibited at some locations. See Requirement *5.6.3, "RESPIRATORY PROTECTION".
- 7) Long hair shall be tied-up or covered when working in field or shop areas, around rotating machinery and in operating production areas as specified by the Solutia Representative.

5.3.1.2 Basic Environmental Protection Rules

- a. All materials shipped out of the location shall meet all governmental and location environmental regulations and policies.
- b. Each waste material shall be appropriately classified and managed as prescribed in the location environmental protection policy manual. See Requirement *5.8.0, "WASTE MANAGEMENT".
- c. Movement or transportation of all material for off-site disposal, recycle, etc., shall be approved by the location environmental protection department.
- d. Spills and releases to the environment shall be reported to the Solutia Representative immediately.
- e. Deliberate or intentional unauthorized discharges and releases to the environment are prohibited.
- f. Any discovered evidence of soil, ground or surface water contamination shall be reported to the Solutia Representative immediately. See Requirement *5.8.1, "GROUND AND SURFACE WATER PROTECTION".
- g. Hazardous and non-hazardous wastes shall be segregated. Exceptions may require that the mixture be treated as a hazardous waste. See Requirement *5.8.0, "WASTE MANAGEMENT".
- h. Adverse impact upon the environment shall be a dominant factor in the decision to continue to operate or to shut down and repair equipment.
- i. All work should avoid or minimize the generation of wastes. See Requirement *5.8.0, "WASTE MANAGEMENT".
 - 1) Before beginning any work, plans shall be developed as to how a spill

or release may occur, how it can be avoided, and how to respond to a spill or release should it occur.

- 2) Spilled material shall be contained. Spilled material and contaminated soils shall be cleaned up per location requirements.

5.3.1.3 Use of Solutia Equipment

- a. In the event contractors are permitted to use Solutia's tools, equipment, facilities or personal protective equipment, contractors shall assume full responsibility for all injuries, illnesses and damage that may result from such use.
- b. Contractors shall return all tools, equipment, facilities or personal protective equipment in the same good-working condition as received from Solutia.

Site Requirement *6.3.1

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5.3.2 Personal Protective Equipment

5.3.2.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR *1926.28, "Personal Protective Equipment, Subpart*1926.E "Personal Protective and Life Saving Equipment", and Subpart*1910.I, "Personal Protective Equipment".

5.3.2.1 General Requirements

- a. Contractors shall furnish, and require the use and wearing of, proper protective devices and personal protective equipment by their employees and by their subcontractors' employees.
- b. Personal protective equipment shall not be modified or used in any manner other than that for which it was designed.

5.3.2.2 Basic Personal Protective Equipment Requirements

- a. Employees shall wear non-conductive hard hats which meet the specifications of 29 CFR*1926.100, "Head Protection" and ANSI Z89.1, "Protective Headwear for Industrial Workers".
 - 1) Hard hats shall be of a type which provides for the use of eye and face protective devices associated with welding and grinding.
 - 2) Hard hats shall be worn with the peak forward.
 - 3) Hard hats shall be worn during all welding and grinding operations in accordance with location requirements.
- b. Employees shall wear safety glasses which meet the specifications of ANSI Z87.1, "Practice for Occupational and Educational Eye and Face Protection".

- 1) Safety glasses shall be worn under welding hoods and face shields.
 - 2) Safety glasses shall be worn under chemical/mono-goggles unless the goggles are constructed with high impact lenses.
- c. Specialized eye protection requirements for certain work activities shall comply with 29 CFR*1926.102, "Specialized Eye Protection", and 29 CFR*1910.133, "Eye and Face Protection".
 - d. Some locations may prohibit the wearing of contact lenses.
 - e. Employees shall wear steel-toed safety shoes or boots which are made of non-porous material, preferably sturdy leather. Note: Steel-toed safety shoes are not required when the work is exclusively office work.

5.3.2.3 Other Personal Protective Equipment Requirements

- a. Hearing protection is required in designated high noise areas and when performing high noise producing work. Location requirements for hearing protection shall apply to all contractor activities. See Requirement *5.6.2, "HEARING PROTECTION".
- b. Contractors shall provide respiratory protection to protect their employees from potential exposure to harmful dust, mist, fumes, gases or vapors. The Solutia Representative will advise contractors of specific location requirements for respiratory protection. See Requirement *5.6.3, "RESPIRATORY PROTECTION".
- c. Fall protection equipment used for elevated work shall be parachute type safety harness with thigh straps and shock absorbing lanyards which are no greater than six (6) feet in length with double locking latches. See Requirement *5.5.8, "AERIAL LIFTS".
- d. Employees working over or near water, where the danger of drowning exists, shall wear U.S. Coast Guard approved life jackets or buoyant work vests in accordance with 29 CFR *1926.106, "Working Over or Near Water".
- e. Specialized equipment, such as gloves, chemical suits, boots, etc., for certain work activities shall be used as required by location personal protective equipment procedures.
- f. Contractors shall ensure that gloves are being used by their employees to protect hands from chemical agents, heat, cold or during activities having the potential for hand injuries as identified by the contractor or the Solutia Representative.

- g. Employees shall use combination metatarsal/shin guards around power or pneumatic tools which may throw off material or pose a threat of injury from exposure to sharp edges.
- h. Employees, when installing metal jacketing over insulation, shall wear sleeve guards and appropriate gloves to protect themselves from being cut by metal edges.

5.3.2.4 Training Requirements

- a. Contractors shall train their employees in the use of all personal protective equipment they will need to safely perform their work. Training shall begin in the new-hire orientation sessions and continue as needed throughout the term of employment.

Site Requirement *6.3.2

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ENVIRONMENTAL, HEALTH & SAFETY

Requirements for

SOLUTIA

JOB OR PROJECT TITLE

CERTIFIED Management Representative

(Company Name)

_____ agrees to
adhere to Solutia _____ (formerly Monsanto) EH&S requirements during the
execution of the above job/project work. This page must be signed by a
company officer indicating your company will comply with these requirements
and be returned to the Buyer listed below prior to issuance of a purchase order.

Buyer

Signature

Title

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The package of ES&H Rules required by this job or proposed job includes the sections checked below:

The Contractor/Guest ES&H (Environment, Safety and Health) Requirement in the 5.0 Series are the minimum Governmental and Solutia Company Requirements.

| REQUIREMENT NUMBERS(S) | REVISION NO. # | TITLE | REQUIRED (✓) |
|---------------------------|-------------------|--|-----------------|
| 5.1.0 6.1.0 | 1 1 | Contractor Management Systems | ✓ |
| 5.1.1 6.1.1 | 1 0 | Emergency Response | ✓ |
| 5.1.2 | 1 | Management of Change | ✓ |
| 5.1.3 6.1.3 | 1 1 | Training | ✓ |
| 5.1.4 6.1.4 | 1 0 | English Proficiency | ✓ |
| 5.2.0 6.2.0 | 1 0 | Working In An Operating Unit | |
| 5.2.1 | 1 | Office Safety | |
| 5.3.0 | 1 | Housekeeping | ✓ |
| 5.3.1 6.3.1 | 1 0 | Basic Environmental, Safety and Health Rules | ✓ |
| 5.3.2 | 1 | Personal Protective Equipment | ✓ |
| 5.3.3 6.3.3 | 1 0 | Accident/Incident Investigation | ✓ |
| 5.3.4 | 1 | Pre-Start-Up ES&H Review | |
| 5.3.5 6.3.5 | 1 0 | Injury and Illness Recordkeeping and Reporting | ✓ |
| 5.3.6 6.3.6 | 1 0 | Portable Power Tools | ✓ |
| 5.3.7 6.3.7 | 1 0 | Hand Tools | ✓ |
| 5.3.8 | 1 | Scaffolding | |

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|---------------------------|-------------------|--------------------------------------|--------------|
| 5.3.9 | 1 | Stairways and Ladders | |
| 5.3.10 6.3.10 | 1 0 | Abrasive blasting | |
| 5.3.11 6.3.11 | 1 0 | High Pressure Water Blasting | ✓ |
| 5.3.12 6.3.12 | 1 0 | Welding, Cutting and Brazing | ✓ |
| 5.3.13 6.3.13 | 1 0 | Slings, Chainfalls and Come-Alongs | ✓ |
| 5.3.14 6.3.14 | 1 0 | Compressed Gas Cylinders | ✓ |
| 5.4.0 | 1 | Fire Protection and Prevention | ✓ |
| 5.4.1 6.4.1 | 1 0 | Temporary Field Facilities | ✓ |
| 5.4.2 6.4.2 | 1 0 | Steel Erection | |
| 5.4.3 | 1 | Concrete, Concrete Forms and Shoring | |
| 5.4.4 6.4.4 | 1 0 | Security | ✓ |
| 5.5.0 | 1 | Hazardous Work Permits | ✓ |
| 5.5.1 6.5.1 | 1 1 | Confined Space Entry | ✓ |
| 5.5.2 6.5.2 | 1 0 | Breaking Into Pipelines | |
| 5.5.3 6.5.3 | 1 0 | Lockout and Tagging | ✓ |
| 5.5.4 6.5.4 | 1 0 | Electrical Safety | ✓ |
| 5.5.5 6.5.5 | 1 0 | Hot Work | ✓ |

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| 5.5.6 6.5.6 | 1 1 | Hot-Tapping | |
| 5.5.7 | 1 | Trenching and Excavation | ✓ |
| 5.5.8 | 1 | Aerial Lifts/Elevated Work | ✓ |
| 5.5.9 6.5.9 | 1 1 | Fall Protection/Floor & Wall Openings Barricades | ✓ |
| 5.5.10 | 1 | Demolition and Dismantling | |
| 5.6.0 6.6.0 | 1 0 | Occupational Health/Workplace Monitoring | ✓ |
| 5.6.1 | 1 | (Reserved) | |
| 5.6.2 6.6.2 | 1 0 | Hearing Conservation | ✓ |
| 5.6.3 6.6.3 | 1 0 | Respiratory Protection | ✓ |
| 5.6.4 6.6.4 | 1 0 | Hazard Communication | ✓ |
| 5.6.5 6.6.5 | 1 0 | Asbestos Abatement | |
| 5.6.6 6.6.6 | 1 0 | Laboratory Safety | |
| 5.6.7 6.6.7 | 1 0 | Lead Exposure | |
| 5.7.0 6.7.0 | 1 0 | Vehicle Safety | ✓ |
| 5.7.1 6.7.1 | 1 0 | Cranes and Hoisting Equipment | ✓ |
| 5.7.2 | 1 | Pile Driving | |
| 5.7.3 | 0 | Mobile/Powered Construction Equipment | ✓ |
| 5.8.0 6.8.0 | 1 1 | Waste Management | ✓ |
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| 5.9.1 6.9.1 | 1 1 | Substance Detection | ✓ |
| 6.10.1 | 0 | Fire System Impairments | ✓ |
| 6.10.2 | 0 | Radiation & Industrial Radiography | ✓ |
| 6.10.3 | 0 | Chemical Control | ✓ |
| 6.10.4 | 0 | Bloodborne Pathogens | ✓ |
| 6.10.5 | 0 | Heat Stress | ✓ |
| 6.10.6 | 0 | Breathing Air | ✓ |
| 6.10.7 | 0 | Interlock Procedure | ✓ |
| 6.10.9 | 1 | Installation, Inspection and Testing of Temporary Electrical Powered Equipment | ✓ |
| 6.10.10 | 0 | Refractory Ceramic Fibers | |
| 6.10.11 | 0 | Requirement for Work On/Near Railroad Tracks | |

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5.3.3 Accident/Incident Investigation

5.3.3.0 Accident and Incident Reports

- a. Accidents and incidents as specified below shall be reported on an accident/incident report form specified by the Solutia Representative: [See Requirement *5.3.5, "INJURY AND ILLNESS RECORDKEEPING AND REPORTING"]

- 1) Occupational injuries and illnesses
- 2) Accidents involving significant damage to property or material loss
- 3) Incidents or "near misses" considered by the contractor or location management to be potentially serious
- 4) Spills and releases

5.3.3.1 Formal Investigations

- a. Formal investigation for potentially serious accidents and recordable injuries/illnesses shall be conducted as specified by the Solutia Representative. Procedures to be followed are:
- 1) The first concern at an accident is care of the injured. Nothing should interfere with this except the safety of the rescuers themselves.
 - 2) After the accident site is safe to approach, the investigation should begin.
 - 3) Preserve the scene as it was after the accident. Cordon off or barricade the area to prevent curious bystanders from destroying evidence.
 - 4) Make a walk-through of the accident site. Take notice of and record the location of all items of evidence. Mark the location of items likely to be moved.

- 5) Obtain the identity of all people who might have information about the accident. Record their names, crafts and company worked for.
- 6) Examine the evidence. Items that will provide information about what happened, how it happened and why it happened must be identified and examined. Photographs of the accident site and the items of evidence should be taken as soon as possible after the accident.
- 7) Make a diagram of the accident site. A sketch should be made showing the location of all evidence essential to understanding the accident situation. Distances should be measured and recorded on the sketch.
- 8) Interview all witnesses and obtain statements from them. Persons who may be able to contribute information about the accident should be interviewed as soon as possible after the accident, and recorded statements should be obtained from them.
- 9) A written report shall be prepared for all serious accidents. The report should include:

- A. Accident/incident description. What happened, when it happened and who was involved
- B. The underlying causes
- C. Management and/or program deficiencies
- D. Identification and implementation of corrective action to prevent a recurrence
- E. Definition of accountabilities and timetables for corrective action
- F. A designee to follow-up the corrective actions

- b. Accident and incident and job-related injury data are maintained and periodically reviewed to determine the most serious and frequent causes of accidents and incidents. Appropriate actions to address the causes are implemented.
- c. Immediately upon completion of a formal investigation report, copies shall be issued to those people designated by the Solutia Representative.

- d. Copies of all accident and incident reports and all formal investigation reports shall be maintained on file by contractors and the Solutia Representative.

Site Requirement *6.3.3

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5.3.5 Injury and Illness Recordkeeping and Reporting

5.3.5.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR *1904, "Recording and Reporting Occupational Injuries and Illnesses".

5.3.5.1 Injury and Illness Recordkeeping

- a. Contractors shall have responsibility for maintaining injury and illness records for their employees.
- b. Management will maintain an OSHA Injury/Illness Form 200 Log for contractors/guests.

5.3.5.2 Injury and Illness Reporting

- a. Contractors shall immediately notify the Solutia Representative of any injury, illness and any loss of or damage to Solutia property, including injury and illness to, or damage by, all subcontractors and material suppliers under control of the contractor.
- b. Contractors shall provide to the Solutia Representative a copy of the completed Accident Report, Solutia Form G-4001, and a copy of Employer's First Report of Injury or Illness (or such other similar report required by federal, state, county and municipal or local safety laws) for each job-related injury or illness to an employee. These reports must be provided soon as possible after the occurrence of an incident.
 - 1) The Solutia Form G-4001 (Page 5 of this Requirement) is a simple investigation form for all incidents. The Solutia Representative will fill out the Location Number and the Report Number. The Contractor shall fill out the remainder of the form as follows:
 - A. In order to differentiate between Solutia employees and Contractors/Guests, it is necessary to write the word Contractor or

Visitor in the block titled "Department Assigned". Include in the lower left section the name of the reporting contractor.

- B. If an incident involves more than one employee, a separate form must be prepared for each injured employee.
- C. If there were more than one type of INJURY/ILLNESS involved in the incident, do not show more than two. Indicate the dominant injury/illness by placing a (1) in the box and the secondary by placing a (2). When reporting a Near Miss Incident, put the number in the No Apparent Injury/Illness box.
- D. If there were more than one part of the body injured, do not show more than two parts in the INJURED PART section. The most severely injured part of the body should be indicated by placing a (1) in the appropriate box in the first column.
- E. If there is a secondary injury, it is indicated by (2) in the first column. The second column is used for location of injury, i.e., Left, Right or Both.
- F. Please write whatever explanatory information is available at the bottom of the form.

NOTE: Completion of the G-4001 Form is required only for each OSHA Recordable incident occurring on the location. However, if desired, it may be used for all incidents, including near misses.

- c. Contractors shall provide to the Solutia Representative, within the first five working days of each month, a completed copy of the Accident Summary Report for the previous month. (Page 6 of this Requirement) Instructions for its completion are:

(Numbers correspond to those on the sample form.)

- 1) Month and year of report — reporting period shall be first day through last day of month.
- 2) Management Contract Number and/or Purchase Order Number.
- 3) Management Plant or location name.
- 4) Date report is completed. (Column Data Entries)
- 5) Include a line for each contractor and subcontractor employed during the month.

- 6) Total number of man-hours worked during the month, including premium time man-hours. Note: For this report, each premium or overtime hour is reported as one hour.
- 7) Number of first aid incidents.
 - A. First aid, using the OSHA definition, is limited to one-time treatment at contractor or location first aid facility, doctor's office, or hospital for observation, cuts, burns, sprains, splinters and other injuries which require no further medical care. It is the injury or the treatment given which determines whether or not an injury is a first aid case, not who provides the treatment.
- 8) Number of injuries and illnesses which are OSHA Recordable.
 - A. Included are fatalities, lost workday cases and restricted workday cases. These are the more severe incidents which require medical care beyond first aid treatment. All incidents involving fractured bones, loss of consciousness or requiring sutures are included.
 - B. An occupational illness is any diagnosed illness which is work-related, such as derma, or other skin disease, asbestosis, or other respiratory disease, carpal tunnel syndrome, or other repeated trauma disorders, and hearing loss. The Solutia Representative should be contracted for further clarification.
- 9) Number of cases that result in days away from work or days of restricted work activity. (Lost time accidents) Every days away from work case or days of restricted work activity case is also counted as a Recordable case in Column 8.
- 10) Number of deaths, both on and off the location, resulting from work-related injury or illness. Every fatality is also counted as a Recordable case in Column 8.
- 11) Number of days away from work. One day is the absence from an entire normally scheduled work shift. The day of the occurrence is not counted.
- 12) Number of days of restricted work. One day is a normally scheduled work shift when the employee is restricted from performing all of the duties of his/her regularly assigned job.
- 13) Total number of work-related injuries and illnesses during the month.

(Sum of Columns 7 and 8)

- D. The Contractor is required to report the monthly injury/illness data for all subcontractors under his control.

Site Requirement *6.3.5

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5.0 - Contractor/Guest ES&H Guidelines

5.3.6 Portable Power Tools

5.3.6.0 Governmental Requirements

- a. Contractors shall comply with 29 CFR*1910.242, 243 and 244, "Hand and Portable Powered Tools and Equipment", and Subpart*1926.I, "Tools—Hand and Power".

5.3.6.1 General Requirements

- a. Contractors shall maintain all portable power tools, electrical cords and pneumatic hoses in good condition and proper working order. Faulty or damaged tools, cords and hoses shall be tagged "Do Not Use" and removed from service immediately. Reference 29 CFR*1926.300(a) and *1926.301(a).
- b. When power-operated tools are designed to accommodate guards, they shall be equipped with the manufacturers' guards in operable and original condition, when the tool is in use. Reference 29 CFR*1910.212(a)(2), *1926.300(b) and ANSI B15.1-1953 (R 1958).
- c. Cords and hoses shall be protected from damage and shall be routed through the job location such that they are not tripping hazards. Reference 29 CFR*1926.416(a)(2) and (b)(2).
- d. Employees using portable power tools and exposed to the hazard of falling, flying, abrasive and splashing objects, or exposed to harmful dusts, fumes, mists, vapors or gases shall be provided with and use the particular personal protective equipment necessary to protect them from the hazard. Reference 29 CFR*1926.300(c) and *1926.303(c)(9). See Requirement *5.3.2, "PERSONAL PROTECTIVE EQUIPMENT".

5.3.6.2 Tools

- a. Electric power operated tools and power cords shall have the third wire ground whole

and in place. Reference 29 CFR*1926.404(f)(7)(iv). Double insulated tools shall be clearly marked. Protection against electrical shock shall be ensured by contractors using either of the following methods:

- 1) All 120-volt single-phase, 15- and 20-ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters for personnel protection. Reference 29 CFR*1910.304(b)(1)(i) and *1926.404(b)(1)(ii).
 - 2) Through compliance with the requirements of 29 CFR *1920.304(b)(1)(ii) and *1926.404(b)(1)(iii), "Assured equipment grounding conductor program".
- b. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected. Tools shall not be hoisted or lowered by their hoses. Reference 29 CFR*1926.302(b)(1), (2) and (6).
 - c. All pneumatically driven nailers, staplers and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi pressure at the tool, shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface. Reference 29 CFR*1926.302(b)(3).

5.3.6.3 Training Requirements

- a. Contractors shall train their employees in the use of all portable power tools they will need to safely perform their work.
 - 1) Powder-actuated tools shall be operated only by employees who have been trained in the operation of the particular tool in use. Reference 29 CFR *1926.302(e).

Site Requirement *6.3.6

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5.3.7 Hand Tools

5.3.7.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR *1910.242, "Hand and Portable Powered Tools and Equipment", and *1926.301, "Hand Tools".

5.3.7.1 General Requirements

- a. Contractors shall not issue or permit the use of unsafe hand tools. Reference 29 CFR*1926.301(a)
- b. Hand tools shall be kept in good condition — sharp, clean, oiled, dressed and not abused.
- c. Tools subject to impact (chisels, star drills, caulking irons) tend to "mushroom" and shall be kept dressed to avoid flying spalls. Reference 29 CFR*1926.301(c).
- d. Tools shall not be used beyond their capacity; use of "cheaters" with tools are prohibited. Use the proper tool for the job.
- e. Wooden handles of tools shall be kept free of splinters and cracks and be kept tight in the tool. Reference 29 CFR*1926.301(d).

5.3.7.2 Training Requirements

- a. Contractors shall train their employees in the proper use of all hand tools they will need to safely perform their work.

Site Requirement *6.3.7

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5.0 - Contractor/Guest ES&H Guidelines

5.3.11 High Pressure Water Blasting

5.3.11.0 General Requirements

- a. Typical high pressure water blasting (hereafter called hydroblasting) equipment delivers water at pressures up to 10,000 psi. Components of hydroblasting equipment include:
 - 1) A positive displacement pump,
 - 2) A pump driver (electric motor or internal combustion engine),
 - 3) High pressure hose or hoses,
 - 4) Lance and nozzle, and
 - 5) Controls. The controls include one or more devices (called dump valves) to rapidly reduce the pump discharge pressure to a minimum level.
- b. Hoses, fittings, lances and nozzles shall be inspected and pressure tested prior to each use. Any worn or damaged parts shall be replaced before cleaning begins.
- c. The engine or motor controls and the dump valve system shall be tested each time the equipment is started up. Any malfunctions shall be corrected before cleaning begins.
- d. Placement of the portable engine or motor and pump shall be such that the equipment does not block passageways nor pose an ignition hazard in classified areas.
 - 1) A hot work permit is required. See Requirement *5.5.5, "HOT WORK PERMIT".
 - 2) If the pump drive is an internal combustion engine, the location for it must be such that the exhaust fumes are not likely to pose respiratory hazard.

- 3) If the pump driver is an electric motor, the motor frame must be grounded.
- e. The area around the equipment to be cleaned shall be barricaded or roped off for a distance of 30 feet. Shields may also be necessary to confine the water discharge. See Requirements *5.5.9, "FALL PROTECTION", *5.8.0 "WASTE MANAGEMENT", AND *5.8.1, "GROUND AND SURFACE WATER PROTECTION".
- f. Minimum personal protective equipment for any hydroblasting work shall be goggles, face shield, hard hat, steel-toe boots, and hearing protection. Certain cleaning jobs will require additional protective equipment such as gloves, slicker suit and respiratory protection. See Requirements *5.3.2, "PERSONAL PROTECTIVE EQUIPMENT", and *5.6.2, "HEARING CONSERVATION".
- g. Lance operators shall stand on a firm support. If ladders or scaffold are required, they shall be secured and the lance operators shall wear full fall protection equipment. See Requirements *5.3.2 "PERSONAL PROTECTIVE EQUIPMENT", and *5.5.8, "AERIAL LIFTS".
- h. Hydroblasting equipment shall be provided with a dump valve or valves. The equipment shall be designed so that at least one of the persons operating the lance has direct control of this pressure reduction system. The person operating the pump may also have the independent capability to operate the dump valve in addition to having the capability to instantly shut off the motor or engine.
- i. Hydroblasting equipment shall never be left pressurized and unattended.
- j. When moleing, the nozzle shall not be connected directly to the end of the hose. A section of lance that is at least as long as the largest diameter of the tubes being cleaned shall be connected between the nozzle and the hose to prevent the nozzle from reversing.
 - 1) The lance shall be conspicuously marked about two feet back from the nozzle to alert the operator to the nozzle location as the hose is withdrawn.
 - 2) A shield shall be provided to protect the lance operator from the flow of water and scale out of the tube.
 - 3) No pressure shall be placed on the hose until the lance is inside of the tubular equipment. The pressure shall be dumped before the lance is withdrawn from the tube.
- k. The potential toxic and flammable exposures that could occur during high pressure water blasting (hydroblasting) operations shall be considered in making an evaluation of the potential health hazards to employees. See Requirement *5.6.4, "HAZARD

COMMUNICATION".

5.3.11.1 Training Requirements

- a. Employees who operate hydroblasting equipment shall be trained and be able to demonstrate that they have a good understanding of how the equipment works and how it should be operated for maximum effectiveness and safety.

Definitions

Dump Valve: A spring loaded, "dead man" type device controlled by the lance operator which, when released, instantly lowers the pressure in the system to the minimum.

Lance: A length of metal pipe or tubing to which the nozzle is connected on one end and the hose is connected on the other end.

Lancing: A hydroblasting cleaning of the interior of tube or piping in which the lance operator inserts and retracts the lance and nozzle.

Moleing: A hydroblasting cleaning of the interior of tube or piping in which the lance operator inserts and retracts the hose, lance and nozzle.

Site Requirement *6.3.11

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5.3.12 Welding, Cutting, and Brazing

5.3.12.0 Governmental Requirements

a. Contractors shall comply with all requirements of and be in accordance with:

- 1) Subpart, 29 CFR*1926.J, "Welding and Cutting",
- 2) *1910.252, "Welding, Cutting, and Brazing",
- 3) ANSI Z49.1-1967, "Safety in Welding and Cutting",
- 4) Article 630 National Electrical Code, NFPA 70-1971, and
- 5) ANSI C1-1971 (Revision of 1968), "Electric Welders".

5.3.12.1 General Requirements

- a. A hot work permit is required for all welding, cutting and brazing operations. See Requirement *5.5.5, "HOT WORK PERMIT".
- b. Suitable fire extinguishing equipment shall be immediately available in all welding, cutting and brazing work areas. Reference 29 CFR*1926.352(d). See Requirement *5.4.0, "FIRE PROTECTION AND PREVENTION".
- c. A fire watch shall be provided as required by location procedures and shall be maintain for at least 30 minutes after completion of the job. Reference 29 CFR*1910.252(i)(3)(b).
- d. Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. If fire hazards cannot be removed, positive means shall be taken to confine the heat, sparks and slag and to protect the immovable fire hazards from them. Reference 29 CFR*1926.352(a) and (b).

- e. Spark containment shall be utilized during all welding, burning and grinding operations. Spark containment may include laying fire blankets, placing barricades, totally enclosing the spark producing operation, or by the use of a fire watch. Employees working around or below the welding, burning or grinding operation shall be protected from falling or flying sparks.
- f. Welding, cutting and heating may normally be done without mechanical ventilation or respiratory equipment, but where an unsafe accumulation of contaminants exists, suitable mechanical ventilation or respiratory protective equipment shall be provided. Reference 29 CFR*1926.353 "Ventilation and Protection in Welding, Cutting and Heating".
- g. Whenever welding, cutting or heating is performed in a confined space, exhaust ventilation shall be provided. When sufficient ventilation cannot be provided, employees shall be protected by air line respirators. Reference 29 CFR*1926.353(b).

5.3.12.2 Gas Welding and Cutting

- a. All hoses and torches in use carrying acetylene, oxygen, fuel gas or any substance which may ignite or be harmful to employees shall be inspected at the beginning of each working shift. Defective hoses and torches shall be tagged "Do Not Use" and immediately removed from service. Reference 29 CFR*1926.350(f)(3) and (g)(2).
- b. Torches shall be lighted from friction lighters and not by matches or from hot work. Reference 29 CFR*1926.350(g)(3).
- c. Directional gas flow fittings (back-flow valves) shall be provided on hoses to prevent reverse gas flow or back flow.
- d. Torches shall be turned off and removed from confined spaces when not in use.

5.3.12.3 Arc Welding and Cutting

- a. Arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc. Reference 29 CFR*1926.351(e).
- b. Arc welding and cutting cables shall be of the completely insulated, flexible type,

capable of handling the maximum current requirements of the work in progress. Cables in need of repair shall not be used. Reference 29 CFR *1926.351(b)(1) and (4).

- c. When the welder or cutter has occasion to leave work or to stop work for any appreciable length of time, or when the welding or cutting machine is to be moved, the power supply switch to the equipment shall be opened. Reference 29 CFR*1926.351(d)(3).
- d. All ground return cables and all arc welding and cutting machine grounds shall be in accordance with 29 CFR *1926.351(c).
 - 1) Ground connections shall be made directly to the material being welded.

5.3.12.4 Training Requirements

- a. Employees who perform welding, cutting and brazing work shall be trained in the safe use of their equipment.
 - 1) Contractors shall instruct employees in the safe use of fuel gas. Reference 29 CFR*1926.350(d).
 - 2) Contractors shall instruct employees in the safe means of arc welding and cutting in accordance with 29 CFR*1926.351(d)(1)-(5).
- b. Fire watches shall be trained in accordance with 29 CFR *1910.252(a)(2)(iii).

Site Requirement *6.3.12

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5.3.13 Slings, Chainfalls, and Come-alongs

5.3.13.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1910.184, "Slings".

5.3.13.1 General Requirements

a. Slings

- 1) Slings shall not be loaded in excess of their rated capacities. Reference 29 CFR*1910.184(c)(4).
- 2) Slings shall be padded or protected from sharp edges of loads and shall not be pulled from under a load when the load is resting on the sling. Reference 29 CFR*1910.184(c)(4) and (10).
- 3) Each day prior to use, slings and all fastenings and attachments shall be inspected for damage or defects. Damaged or defective slings shall be tagged "Do Not Use" and immediately removed from service. Reference 29 CFR*1910.184(d).
- 4) Wire rope slings shall be removed from service if any of the following conditions are present: [Reference 29 CFR*1910.184(f)(5)]
 - A. Ten randomly distributed broken wires in one rope lay or five broken wires in one strand in one rope lay.
 - B. Wear or scraping of one-third the original diameter of outside individual wires.
 - C. Kinking, crushing, bird caging or any other damage resulting in distortion of the wire rope structure.

- D. Evidence of heat damage.
 - E. End attachments that are cracked deformed or worn.
 - F. Hooks that have been opened more than 15 percent of the normal throat opening measured at the narrowest point or twisted more than 10 degrees from the plane of the unbent hook.
 - G. Corrosion of the rope or end attachments.
- 5) Synthetic web slings shall be immediately removed from service if any of the following conditions are present: [Reference 29 CFR*1910.184(i)(9)]
- A. Acid or caustic burns.
 - B. Melting or charring of any part of the sling surface.
 - C. Snags, punctures tears or cuts.
 - D. Broken or worn stitches.
 - E. Distortion of fittings.

a. Chainfalls and Come-alongs

- 1) Safety latches shall be installed and functional on hanging hooks and load hooks.
- 2) Chains, cables and hooks shall be in good physical condition. Hanging hooks shall be free to pivot when lifting or pulling a load.
- 3) Load chains and cables shall not be used as slings.
- 4) Capacities of chainfalls and come-alongs shall be adequate for the load to be lifted or pulled. "Cheaters" shall not be used on the handles of come-alongs.
- 5) Chainfalls and come-alongs shall be inspected annually, and the most recent inspection date shall be clearly indicated on the equipment.

5.3.13.2 Training Requirements

- a. Contractors shall train employees who use slings, chainfalls and come-alongs in their safe use.

Site Requirement *6.3.13

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5.0 - Contractor/Guest ES&H Guidelines

5.3.14 Compressed Gas Cylinders

5.3.14.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR *1926.350(a) "Transporting, Moving and Storing Compressed Gas Cylinders", (b) "Placing Cylinders and (c) Treatment of Cylinders", and *1910.252(a)(2) "Cylinders and Containers".

5.3.14.1 General Requirements

- a. Cylinders shall be secured in an upright position and a suitable cylinder truck, chain or other steadying device shall be used to keep compressed gas cylinders from being knocked over while in use or in storage. Reference 29 CFR *1926.350(a)(7) and (9).
- b. When work is finished, when cylinders are empty, in storage or are moved at any time, the cylinder valve shall be closed. Valve protection caps shall be in place and secured. Reference 29 CFR*1926.350(a)(1) and (8).
- c. Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. Cylinders, full or empty shall not be used as rollers or supports. Reference 29 CFR*1926.350(a)(3) and (c)(1).
- d. Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag or flame will not reach them. When this is impractical fire resistant shields shall be provided. Reference 29 CFR *1926.350(b)(1).
- e. Cylinders shall be placed where they cannot become part of an electrical circuit. Electrodes shall not be struck against a cylinder to strike an arc. Reference 29 CFR *1926.350(b)(2).
- f. Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces. Reference 29 CFR *1926.350(b)(4).

- g. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a noncombustible barrier at least five feet high having a fire resistance rating of at least one-half hour. Reference 29 CFR*1910.252(a)(2)(iv)(c).

5.3.14.2 Training Requirements

- a. Contractors shall train employees in the safe use of fuel gas. Reference 29. CFR*1926.350(d).
- b. Training subjects shall include opening of cylinder valves, installation and removal of regulators and steps to be taken in the event of any gas leaks.

Site Requirement *6.3.14

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5.4.0 Fire Protection and Prevention

5.4.0.0 Governmental Requirements

- a. Contractors shall meet the requirements of Subpart, 29 CFR *1926.F, "Fire Protection and Prevention", and 29 CFR *1910.157, "Portable Fire Extinguishers".

5.4.0.1 General Requirements

- a. Access to fire fighting equipment shall be maintained at all times. Access for fire control and emergency vehicles shall be maintained at all times.
Reference 29 CFR*1926.150(a)(2).
- b. Contractors shall familiarize employees with the methods used at the location for reporting a fire, the location fire alarm system and the regulations for the conduct of personnel in the event of an alarm. Location alarm codes shall be conspicuously posted for maximum visibility in the project location.
See Requirement *5.1.1, "EMERGENCY RESPONSE".
- c. Contractors shall provide necessary fire extinguishers for protection of temporary facilities and the job location.

5.4.0.2 Fire Extinguishers

- a. On-location buildings occupied by contractor employees shall meet the following:
 - 1) A fire extinguisher rated not less than 2A shall be provided for every 3,000 square feet of building area. Travel distance to the nearest extinguisher shall be 100 feet or less. Reference 29 CFR*1926.150(c)(1)(i).
 - 2) Fire extinguishers shall be located on each floor and adjacent to stairwells on multi-story buildings. Reference 29 CFR*1926.150(c)(1)(iv).

- b. A fire extinguisher rated not less than 10B shall be provided within 50 feet of flammable or combustible liquids or flammable gas as in quantities of more than 5 gallons or 5 pounds. Reference 29 CFR*1926.150(c)(1)(vi).
- c. Fire extinguishers shall be listed by a nationally recognized testing laboratory. Reference 29 CFR*1926.150(c)(1)(ix).
- d. Fire extinguishers shall be inspected monthly and shall receive an annual maintenance check. Reference 29 CFR *1910.157(e)(1)-(5).
- e. Fire extinguishers with a broken seal shall be reported to supervision for inspection and servicing.

5.4.0.3 Fire Prevention

- a. Electrical wiring shall meet the following requirements:
 - 1) NFPA 70, "National Electric Code"
 - 2) ANSI C2, "National Electric Safety Code"
 - 3) Subpart, 29 CFR*1926.K, "Electrical"
 - 4) Any other applicable regulations.
- b. Temporary buildings shall be approved by the Management Representative. Reference 29 CFR*1926.151(b)(1)-(3) See Requirement *5.4.1, "TEMPORARY FIELD FACILITIES".
- c. Temporary heating devices shall be approved by the Management Representative.
- d. Smoking is permitted in designated areas only.
- e. Approved metal safety cans shall be used for handling flammable liquids in quantities greater than 1 gallon. Reference 29 CFR*1926.152(a)(1).
- f. Storage areas of, and tanks containing, flammable and combustible liquids shall be located not nearer than 50 feet to any overhead pipelines or utilities.
- g. Indoor storage of flammable and combustible liquids shall meet the following requirements:
 - 1) Quantities of 25 gallons or more shall be stored in an approved cabinet and not

more than 25 gallons shall be outside of an approved cabinet.
Reference 29 CFR *1910.106(d)(3)(i) and *1926.152(b)(2).

- 2) Not more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one cabinet, and not more than three cabinets shall be in a single storage area. Reference 29 CFR*1926.152(b)(3).
- 3) Cabinets shall be labeled "Flammables - Keep Fire Away".
Reference 29 CFR*1926.152(b)(2)(iii).

h. Outside storage of flammable and combustible liquids shall meet the following requirements:

- 1) Storage of containers (not more than 60 gallons each) shall not exceed 1,100 gallons in any one area and shall not be nearer than 25 feet to a building. Groups containing 1,100 gallons shall be separated by a five-foot clearance. Reference 29 CFR*1926.152(c)(1).
- 2) The storage area shall be graded in a manner to divert possible spills away from buildings or shall be surrounded by a curb or earth dike at least 12 inches high. Reference 29 CFR*1926.152(c)(3).
- 3) Portable tanks shall not be nearer than 25 feet to any building and individual tanks exceeding 1,100 gallons shall be separated by a five-foot clear area. Reference 29 CFR*1926.152(c)(4).
- 4) The vehicle fueling station shall be a minimum of 50 feet from buildings or other important structures.
- 5) Portable tanks and containers shall be grounded.
- 6) Storage tanks shall be properly vented. Reference API Standard 2000, "Venting Atmospheric or Low Pressure Tanks".

i. Flammable and combustible liquids shall be dispensed in accordance with 29 CFR*1926.152(e), "Dispensing Liquids".

j. Flammable liquids shall be kept in closed containers when not in use and shall not be allowed, under any circumstances, within 50 feet of an open flame or ignition source.

k. Tank trucks for refueling shall meet the requirements of the standard for tank vehicles for flammable and combustible liquids, NFPA No. 385, "Flammable and Combustible Liquid Tank Vehicles".

1. Tanks and dispensing equipment or pumps and any controls shall be physically protected from vehicle impact and damage. Service and refueling areas shall meet requirements of 29 CFR*1926.152(g), "Service and Refueling Areas".

5.4.0.4 Training Requirements

- a. Contractors shall provide, at least annually, an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting. Reference 29 CFR*1910.157(g).

Definitions

Combustible Liquids: Any liquid having a flash point above 100 Fahrenheit (37.8 Celsius).

Flammable Liquids: Any liquid having a flash point below 100 Fahrenheit (37.8 Celsius).

Site Requirement *6.4.0

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5.0 - Contractor/Guest ES&H Guidelines

5.4.1 Temporary Field Facilities

5.4.1.0 General Requirements

- a. Contractors shall provide the following temporary field facilities unless specifically authorized by the Solutia Representative, in writing, to utilize existing accommodations:
 - 1) Office, tool and material trailers as needed and feasible within the available space.
 - 2) An eating facility which is separate and distinct from tool and material trailers and sanitary facilities.
 - 3) A wash station with appropriate drainage, or collection of waste water, at each work location. Reference 29 CFR *1926.51(f).
 - 4) Sanitary facilities in accordance with 29 CFR*1926.51(c).
 - 5) An adequate supply of potable drinking water in accordance with 29 CFR*1926.51(a).
- b. Temporary facilities shall be in accordance with 29 CFR *1926.151(b), "Temporary Buildings", and any applicable local, state and federal building and environmental codes or regulations.
- c. All temporary facilities shall be tied down or otherwise secured to prevent displacement during inclement weather conditions.
- d. Appropriate waste disposal containers and equipment shall be provided and disposal of waste shall be accomplished as needed to maintain a clean and functioning location free of hazards. See Requirements *5.3.1, "BASIC ENVIRONMENTAL, SAFETY AND HEALTH RULES", and *5.8.0, "WASTE MANAGEMENT".
- e. Appropriate fire protection shall be available at all temporary facilities. See Requirement *5.4.0, "FIRE PROTECTION AND PREVENTION".

- f. Smoking facilities shall comply with location guidelines and policies.
- g. Contractors shall be responsible for the installation and maintenance of temporary pipe, sewer, cable, conduit and wire for electrical power, water, telephone and sanitation to connection points specified by the Solutia Representative.
- h. Contractors shall be responsible for the security of all temporary facilities under their control. See Requirement *5.4.4, "SECURITY".
- i. Contractors shall locate temporary field facilities not nearer than 50 feet to any overhead pipelines or utilities.
- j. Contractors shall be responsible for removal of all temporary facilities upon completion of their work, including disconnection of utilities and removal of trash, remaining materials of construction, buildings and trailers.
 - 1) Any defacing of grounds or roads by contractors shall be repaired before leaving the location.
 - 2) Payment of invoices shall be withheld until the Solutia Representative is satisfied with the clean up and repair.

Site Requirement *6.4.1

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5.4.4 Security

5.4.4.0 General Requirements

- a. Contractor employees shall enter and leave the location only through the gate specified.
- b. All persons visiting the location shall be registered at their entry and exit points in accordance with location re-quirements.
- c. Contractor employees shall wear an identifying badge at all times when on the location.
 - 1) Unless otherwise authorized by the Solutia Representative, contractors have the responsibility to assign, distribute and account for all employee badges.
- d. Portable radios, tape decks, television sets and like equip-ment are prohibited on the location. Cameras may be brought into and used only in compliance with the location require-ments.
- e. Routes for contractor employees through the location to the work site will be designated. Contractor employees will be confined to the particular area in which they are working.
- f. Contractors shall comply with specific location conditions or additional security regulations.
- g. Firearms of any type shall not be permitted except under special authorization.
- h. Contractors shall be responsible for the security of all materials, tools and equipment, whether owned by the contractor, rented by the contractor or loaned to the contractor by Solutia.

Site Requirement *6.4.4

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1. The site shall be developed in accordance with the following requirements:

a. The site shall be developed in accordance with the following requirements:

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5.5.0 Hazardous Work Permit

5.5.0.0 General Requirements

- a. Permits shall be used for potentially hazardous work as specified by the Solutia Representative. Permits shall be issued to contractors by location operations department personnel.
- b. Contractors shall comply with location procedures concerning the use of permits. Some permits are common to all locations while others will be specific to a particular location. Permits common to all locations include:

- 1) Hot Work (Fire Permit):

Required for all welding, burning, cutting, torch heating or similar operations using an electric arc or open flame and for any other flame or spark producing operation, such as, non-explosion proof power tools, chipping, grinding, etc. See Requirement *5.5.5, "HOT WORK PERMIT".

- 2) Vessel Entry or Confined Space:

Required for all enclosures that are not designed for continuous employee occupancy and which have limited or restricted means for entry and exit. Included are insides of tanks, tank cars, barges, towers, tunnels and other similar containers. Also included are trenches, pits and open top containers greater than four feet deep and any other enclosed area where flammable or toxic gases may be present or the possibility of oxygen deficiency exists. See Requirement *5.5.1 "CONFINED SPACE ENTRY"

- c. Specific permits required at particular locations may include:

- 1) Asbestos Abatement
- 2) Crane Operations Near Power Lines
- 3) Hot-Tapping Pressurized Systems

- 4) Excavations and Trenching
- 5) Nondestructive Testing, such as Radiographic and Magnoflux Testing
- 6) Electrical Work on Energized Systems
- 7) Pressure Testing
- 8) Abrasive Blasting
- 9) Hazardous Materials Work
- 10) Breaking into Piping Systems
- 11) Aerial Lifts
- 12) Scaffolding
- 13) Work Requiring Use of Respirators
- 14) Safety Device Impairment
- 15) Fire Protection System Impairment

- d. It is imperative that the conditions noted on the permits are identical to the actual job conditions. When the nature or conditions of a job change in any way, when new tools or equipment are required, when different methods are employed to do the job or there are any differences from what is stated on the initial permit, the permit becomes invalid, and work shall stop immediately. Work shall not resume until a new permit has been issued for the new conditions.
- e. Permits shall be reviewed with all workers performing the tasks for which the permit was issued so that the workers have a full understanding of the permit requirements and limitations.
- f. The approved permit shall be displayed in the vicinity of the work covered by the permit and shall be clearly visible.
- g. In the event of a location emergency alarm, hazardous work permits become invalid and work authorized under them shall cease until authorized otherwise by the Solutia Representative.

Site Requirement *6.5.0

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5.5.1 Confined Space Entry

5.5.1.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1926.21(b)(6)(i) and (ii).

5.5.1.1 General Requirements

- a. Contractors shall comply with location confined space entry procedures.
- b. A confined space entry permit shall be submitted, processed and approved for all entries into confined spaces. Some locations, and some work, may require additional permits for confined space entry. See Requirement *5.5.0, "HAZARDOUS WORK PERMITS".
- c. A contractor representative shall sign the confined space entry permit to indicate that all instructions and conditions are understood and will be complied with.
- d. Contractors shall provide safety attendants as specified by the permit.
 - 1) Safety attendants shall be in the immediate proximity of the confined space point of entry but shall not be allowed to enter the confined space. They shall not attempt a rescue before additional assistance arrives. They shall have no other duties that impair the responsibility of a confined space attendant. They shall be able to deal with emergencies and to call for and receive assistance in situations, such as:
 - A. Loss of communication
 - B. Bodily injury or loss of consciousness
 - C. Loss of ventilation or breathing air supply
 - D. Plant emergencies or conditions that may make occupancy hazardous.

- e. Whenever welding, cutting or heating is performed in a confined space, exhaust ventilation shall be provided. When sufficient ventilation cannot be provided, employees shall be protected by air line respirators. Reference 29 CFR *1926.353(b).

5.5.1.2 Training

- a. Contractor employees entering confined spaces shall be trained in confined space entry in conjunction with the processing of confined space entry permits and other location requirements.
- b. Contractor representatives who are authorized to sign confined space entry permits shall receive the training and testing following the minimum OSHA requirements and all additional site requirements dealing with confined space entry.
- c. Contractor safety attendants (i.e. vessel entry attendants, hole watchers, standby attendants) shall receive training and testing equivalent to that required for location safety attendants.

Definitions

Confined Spaces: Enclosures that are not designed for continuous employee occupancy, have limited or restricted means for entry or exit and are potentially hazardous due to possible:

- a. Atmospheric contamination by toxic or flammable vapors or oxygen deficiency or excess.
- b. Physical hazards such as agitators, other moving parts, electrical shock, engulfment or entrapment.
- c. Contamination by liquids, gases or solids during occupancy.
- d. Any other recognized serious safety or health hazard.

Confined Space Entry: Confined space entry occurs whenever a person's face breaks the plane of the opening to the confined space.

Safety Attendant: A person who is in effective communication with persons inside the confined space at all times.

Oxygen Deficiency: Atmospheres containing less than 19.5 percent oxygen.

Site Requirement *6.5.1

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5.0 - Contractor/Guest ES&H Guidelines

5.5.5 Hot Work Permit (Fire Permit)

5.5.5.0 General Requirements

- a. Contractors shall comply with location hot work procedures.
- b. A hot work permit shall be submitted, processed and approved for any maintenance or operation work related activity which produces a source of ignition. Such activities include but are not limited to:

- 1) Flame Producing Hot Work

- A. Gas welding and cutting
- B. Electric arc welding
- C. Heating torches and other open flames
- D. Soldering
- E. Thawing
- F. Portable space heaters (electric or gas)
- G. Tar pots or kettles
- H. Combustion engine powered vehicles

- 2) Spark Producing Hot Work

- A. Portable electric tools
- B. Grinding
- C. Drilling

- D. Chipping
- E. Sand blasting
- F. Portable compressors
- G. Portable generators

c. Hot work permits may be required for all defined hot work but will be required as a minimum under the following conditions.

- 1) For work involving flame (or high heat) producing equipment used in any area of moderate fire exposure.
- 2) For any work involving flame or spark producing equipment used in any area of high fire exposure.
- 3) For any work involving flame or spark producing equipment on vessels or containers which have been in flammable or toxic service. This applies no matter where the hot work is actually done.

d. In some work activities other hazards must be addressed before hot work may be safely undertaken. These hazards may involve energized equipment, pressurized or contaminated piping, or entry into confined spaces. See Requirements *5.5.1, "CONFINED SPACE ENTRY", *5.5.2, "BREAKING INTO PIPELINES", and *5.5.3, "LOCKOUT AND TAGGING".

e. The following fire prevention actions shall be completed before hot work begins:

- 1) Combustibles shall be moved at least 35 feet from the hot work operations. If combustibles cannot be removed, they shall be protected by flame-proof guards, curtains or covers.
- 2) Flammable liquids shall be removed from the area or totally isolated from the vicinity of the hot work.
- 3) Floor, wall and other openings shall be closed or covered; this includes floor drains.
- 4) Combustible dust shall be cleaned from the vicinity of the hot work operations.
- 5) Where surrounding floors are of combustible construction, these shall be protected with a flame-proof cover. Where electric powered equipment is not involved, the floors may be swept clean and wetted with water.

- f. Before hot work begins, the following conditions shall be assured in order to provide adequate capability at the job site to extinguish any fire which could result:
- 1) Involved personnel shall be informed where and how to turn in a fire alarm.
 - 2) For an area protected by a fixed sprinkler system, the inspecting supervision shall verify that the system is functional and without impairment.
 - 3) Stand-by fire fighting equipment shall be provided at the job site. This equipment shall consist of hand-held fire extinguishers appropriate to the hazards present. These shall be in addition to the complement of extinguishers normally present in the area. See Requirement *5.4.0, "FIRE PROTECTION AND PREVENTION".

- g. Fire watches shall be required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

- 1) Appreciable combustible material closer than 25 feet to the point of operations,
- 2) Appreciable combustibles are more than 35 feet away but are easily ignited by sparks,
- 3) Wall or floor openings within a 35 feet radius expose combustible material in adjacent areas,
- 4) Combustible material are adjacent to the opposite side of metal partitions walls, ceilings or roofs and are likely to be ignited by conduction or radiation.

Fire watch shall be maintained for at least 30 minutes after completion of hot work to extinguish possible smoldering fires.]

- h. Specific or blanket exceptions to these requirements for permitting hot work can be made provided senior location management and the location safety authority have approved the variance. Such exception may involve new construction isolated from present operating areas or total unit or total plant shutdowns. The nature of the exception will be indicated on the permit form.

5.5.5.1 Training Requirements

- a. Fire watchers shall be trained to extinguish small fires and to be knowledgeable of the hot work permit procedure and of the hazards involved in hot work. Reference 29CFR*1910.252(a)(2)(iii).

Site Requirement *6.5.5

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5.5.7 Trenching and Excavation

5.5.7.0 Governmental Requirements

- a. Contractors shall comply with Subpart, CFR*1926.P, "Excavations and Trenches".

5.5.7.1 General Requirements

- a. Contractors shall not initiate excavations without an approved hazardous work permit as required by the location. See Requirement *5.5.0, "HAZARDOUS WORK PERMITS".
- b. If the soil to be excavated is contaminated or suspected of being contaminated, the location environmental department shall be notified. Excavating shall proceed only after authorization by the Solutia Representative.
- c. Contractor shall assign a competent person to all trenching and excavation work. This person shall be clearly identified to all employees assigned to the job.
- d. Underground lines, equipment and electrical cables shall be identified and located prior to beginning work. Reference 29 CFR*1926.651(b)(1)-(4).
- e. Walls and faces of trenches and excavations, five or more feet deep, shall be shored, sloped or shielded as dictated by the type of soil encountered.
- f. Daily inspections shall be conducted by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions. Reference 29 CFR*1926.651(k)(1) and (2).
- g. Employees shall not be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded. Reference 29 CFR*1926.651(e).

- h. Employees shall be protected from excavated or other materials and equipment that could pose a hazard by falling or rolling into excavations. Reference 29 CFR*1926.651(j)(2).
- i. Physical barriers shall be placed around or over trenches and excavations. Barriers shall be removed only when necessary to provide access to personnel or equipment. Flashing light barricades shall be provided at night. See Requirement *5.5.9, "FALL PROTECTION".
- j. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are four feet or more in depth so as to require no more than 25 feet of lateral travel for employees. Reference 29 CFR*1926.651(c)(2).
- k. Backfilling and removal of support systems shall be performed only after employees have cleared the area. All excavations shall be backfilled and graded promptly.
- l. Trenches greater than four feet deep shall require an approved confined space entry permit. See Requirements *5.5.0, "HAZARDOUS WORK PERMITS", and *5.5.1, "CONFINED SPACE ENTRY".

5.5.7.2 Training Requirements

- a. Contractors shall train all employees in the recognition and avoidance of unsafe conditions relative to working in and around excavations and trenches.

Definitions

Oxygen deficiency: Atmospheres containing less than 19.5 percent oxygen.

Site Requirement *6.5.7

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5.5.8 Aerial Lifts

5.5.8.0 Governmental Requirements

- a. Contractors shall comply with the requirements of:
- 1) 29 CFR*1910.28, "Safety Requirements for Scaffolding", and *1926.451, "Scaffolding"
 - 2) Subpart, 29 CFR*1910.D, "Walking and Working Surfaces"
 - 3) 29 CFR*1926.556, "Aerial Lifts"
 - 4) ANSI A92.2, "Vehicle Mounted Elevating and Rotating Aerial Devices"
 - 5) 29 CFR*1926.550(g)(4), "Personnel Platforms"
 - 6) 29 CFR*1910.67, "Vehicle Mounted Elevating and Rotating Work Platforms"

5.5.8.1 General Requirements

- a. Contractors shall provide primary and secondary fall protection systems as described in *5.5.8.2 Specific Requirements for their employees.
- b. Primary fall protection systems are the preferred methods of fall protection and exhaustive efforts shall be taken to use them before resorting to secondary fall protection systems.
- c. In order that fall protection is available to employees at all times, they shall wear an approved full body harness with two shock-absorbing lanyards (secondary fall protection) when six feet or more above their work surface or when it can be reasonably anticipated that movement beyond that work surface will be required.

5.5.8.2 Specific Requirements

a. Primary Fall Protection Systems:

- 1) Primary fall protection systems provide walking and working surfaces in elevated areas which are free from floor openings, are equipped with standard guard rail systems on all open sides and with closure apparatus for ladder openings, or other points of access, when required. These systems include but are not limited to scaffolds, aerial lifts and other approved personnel lifting devices. See Requirements *5.3.8, "SCAFFOLDS", and *5.5.9, "FALL PROTECTION".
 - A. Standard guard rail systems consist of a top rail approximately 42 inches above the walking/working surface, a mid-rail at approximately 21 inches above that surface and a four inch tall toe-board mounted at the working surface. Upright support post spacing shall not exceed eight feet, and the entire system must be capable of supporting 200 pounds force in any direction with minimum deflection.
 - B. Floor opening/hole covers are used to close openings and holes in floors, platforms and walkways. These covers shall be capable of supporting the maximum potential load they may be subjected to, shall completely cover the opening/hole and be secured against accidental displacement. Covers shall be marked "HOLE COVER - DO NOT REMOVE".
- 2) Aerial lifts (boom, scissor and snorkel types) and other vehicle mounted elevated work platforms shall be used in accordance with 29 CFR*1926.556, "Aerial Lifts", and ANSI A92.2. Forklifts with appropriately designed personnel platforms shall comply with 29 CFR *1926.550(g)(4). Employees riding in or working from these lifts shall secure their safety lanyards to the lift basket.
- 3) Fixed industrial ladders with cages and/or third rail fall arresting devices are acceptable for travel to work surfaces only.

b. Secondary Fall Protection Systems

- 1) A secondary fall protection system consists of an approved full body harness and two shock-absorbing lanyards. This system shall be worn and used as a backup to primary fall protection systems and in the absence of primary systems when employees are working six feet or more above the work surface. "Worn and used" means that the body harness shall have the lanyards properly tied off to tie off point or lifeline systems with positive attachment 100 percent of the time.
 - A. Only full body safety harnesses and shock absorbing lanyards capable of supporting 5,400 pounds approved by the Solutia Representative shall be

used.

- B. Fall protection lanyards shall be attached to the D-ring located in the middle back of the safety harness.
- C. The tie off point must be at waist level or higher and capable of supporting at least 5,400 pounds.

2) Lifeline systems are points of attachment for fall protection lanyards

- A. Lifeline systems must be capable of supporting at least 5400 pounds. Reference 29 CFR*1926.104(b).
- B. Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working in elevated areas.
- C. Horizontal lifelines must be made of at least three-eighths inch wire rope properly supported to withstand at least 5400 pounds impact and pulled tight enough to prevent deflection.
- D. Horizontal lifelines shall be positioned so as to provide points of attachment at waist level or higher.
- E. Vertical lifelines are used for fall protection when vertical mobility is required and may be comprised of static lifelines made three-eighths inch wire rope which is equipped with approved sliding rope grabs, or they may consist of self-retracting reel type lanyard/lifelines which are attached directly to a safety harness.
 - 1. Retractable lifelines devices shall be attached to supports capable of withstanding 5400 pounds impact loading and shall be secured by means of shackles and wire rope chokers or synthetic slings.
- F. Sliding rope grabs approved for the size rope used are the only method for securing a safety lanyard to a vertical lifelines. Lanyards shall not be attached to lifelines by means of knots or loops.

- c. Safety nets shall be used only when approved by the Solutia Representative.
- d. All equipment used in elevated work shall be inspected prior to each use by the user. Defective equipment shall be tagged "Do Not Use" and immediately removed from service.

5.5.8.3 Training Requirements

- a. All contractor employees who will be required to perform elevated work shall be fully trained in elevated work practices, the wearing and care of full body safety harnesses and lanyards, and in the safe use of all elevated work equipment.

Site Requirement *6.5.8

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5.5.9 Fall Protection

5.9 FALL PROTECTION

5.9.0 Governmental Requirements

- a. Contractors shall comply with 29 CFR*1910.23, "Guarding Floor and Wall Openings and Holes", and 1926 Subpart M, "Fall Protection".

5.9.1 General Requirements

- a. Contractor shall determine if the walking/working surfaces on which its employees are to work have the strength and structural integrity to support employees safely. Reference 29 CFR 1926.501 (a) (2).
- b. "Unprotected sides and edges." Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. Reference 29 CFR 1926.501 (b) (1).
- c. "Leading edges." Each employee who is constructing leading edge or walking/working on a surface where leading edge is under construction, 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Reference 29 CFR 126.501 (b) (2).

"Hoist areas." Each employee in a hoist area shall be protected from falling 6 feet (1.8 m) or more to lower levels

by guardrail systems or personal fall arrest systems.
Reference 29 CFR 1926.501 (b)(3).

e. "Holes". Each employee on walking/working surfaces shall be protected from:

- 1) falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.
- 2) tripping in or stepping into or through holes (including skylights) by covers.
- 3) objects falling through holes (including skylights) by covers. Reference 29 CFR 1926.501 (b)(4).

f. "Formwork and reinforcing steel". Each employee on the face formwork or reinforcing steel shall be protected from falling 6 feet (1.8 m) or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems. Reference 29 CFR 1926.501 (b)(5).

g. "Ramps, runways, and other walkways". Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems. Reference 29 CFR 1926.501 (b)(6).

h. "Excavations".

- 1) Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier.
- 2) Each employee at the edge of a well, pit shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers. Reference 29 CFR 1926.501 (b)(7).

i. "Dangerous equipment."

- 1) Each employee less than 6 feet (1.8 m) above dangerous equipment shall be protected from falling into or onto

the dangerous equipment by guardrail systems or by equipment guards.

- 2) Each employee 6 feet (1.8 m) or more above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems. Reference 29 CFR 1926.501 (b)(8).

j. "Overhand bricklaying and related work."

- 1) Each employee performing overhand bricklaying and related work 6 feet (1.8 m) or more above lower levels, shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or shall work in a controlled access zone.
- 2) Each employee reaching more than 10 inches (25 cm) below the level of the walking/working surface on which they are working, shall be protected from falling by a guardrail system. Reference 29 CFR 1926.501 (b)(9).

k. "Roofing work on Low-slope roofs." Except as otherwise provided in paragraph (b) of this section, each employee engaged in roofing activities on low-slope roofs, with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or a combination of warning line system and guardrail system, warning line system and safety net system, or warning line system and safety monitoring system. Reference 29 CFR 1926.501 (b)(10).

- l. "Steep roofs." Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems with toeboards, safety net system, or personal fall arrest systems. Reference 29 CFR 1926.501 (b)(12).

m. "Precast concrete erection." Each employee engaged in the erection of precast concrete members and related operations such as grouting of precast concrete members, who is 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest system. Reference 29 CFR 1926.501 (b)(12).

n. "Wall openings." Each employee working on, at, above, or

near wall openings (Including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system. Reference 29 CFR 126.501 (b)(14).

o. "Walking/working surfaces not otherwise addressed." Each employee on a walking/working surface 6 feet (1.8 m) or more above lower levels shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system. Reference 29 CFR 126.501 (b)(15).

p. "Protection from falling objects." When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures:

- 1) Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels; or,
- 2) Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or,
- 3) Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced. Reference 29 CFR 126.501(c).

.2 Standard Specifications

a. Guardrail systems shall consist of top rail, intermediate rail, toeboard and posts, and shall have a vertical height of 42 inches (1.1M) plus or minus 3 inches (8 cm) above the walking/working level. Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 m) of the top edge, in any outward or downward direction, at any point along the top edge.

When guardrail systems are used around holes which are used as points of access (such as ladderways), they shall be provided with a gate, or be so offset that a person cannot walk directly into the hole. Reference 29 CFR 1926.501 (b).

- b. Safety net systems. Safety nets shall be installed as close as practicable under the walking/working area and shall only be used after the approval of the Solutia Certified Representative. Reference 29 CFR 1926.502 (c).

c. Personal fall arrest systems

- 1) Only full body harness and shock absorbing lanyards capable of supporting 5,000 pounds can be used as part of a fall arrest system. Body belts are not acceptable as part of a personnel fall arrest system.
- 2) Snaphooks shall be a locking type.
- 3) Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- 4) Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and Capable of supporting at least 5,000 pounds (22.2kN) per employee attached. Reference 29 CFR 1926.502(d).

- d. Positioning device systems. Positioning device systems shall be rigged such that an employee cannot free fall more than 2 feet (.9m). Reference 29CFR 1926.502(e).

e. Warning line systems.

- 1) Warning line systems shall be erected around all sides of the roof work area not less than 6 feet (1.8 m) from the roof edge.
- 2) No employee shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.
- 3) Mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning

line system, guardrail system, or personal fall arrest system. Reference 29 CFR 1926.502(f).

5.5.9.3 Training requirements.

- a. Contractor shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards. Reference 29 CFR 1926.503.

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5.6.0 Occupational Health Workplace Exposure Monitoring

5.6.0.0 Governmental Requirements

- a. Contractors shall provide their employees access to their exposure records in accordance with 29 CFR*1910.20, "Access to Employee Exposure and Medical Records".

5.6.0.1 General Requirements

- a. Contractors shall provide protection to their employees from overexposure to physical, chemical and biological hazards in the work place.
- b. Contractor employee exposures to physical, chemical and biological agents shall not exceed governmental requirements as established by the American Conference of Government Industrial Hygienists (ACGIH), OSHA or Solutia internal exposure limits, whichever are more stringent.
- c. Contractors shall obtain information on health hazards resulting from agents at the location from the Solutia Representative and communicate this information to their employees. See Requirement *5.6.4, "HAZARD COMMUNICATION".
- d. Contractors shall identify significant health hazards that they introduce into the work areas and communicate this information to their employees and the Solutia Representative. See Requirement *5.6.4, "HAZARD COMMUNICATION".
- e. The location sampling strategy will include contractor employee exposure to potentially significant health hazards.
 - 1) The location will provide exposure monitoring services for contractors when requested in writing. The location will provide contractors with all monitoring results.

- 2) The location industrial hygienist will determine the need for the contractor to provide exposure monitoring and the number of samples required. If contractors conduct exposure monitoring, they shall provide results to the Solutia Representative.
- f. Contractors shall be responsible for asbestos monitoring unless otherwise agreed upon.
 - g. Immediate action shall be taken to reduce employee exposures to potential health hazards to levels that comply with governmental requirements (ACGIH) and Solutia internal limits when exposures exceed such requirements and limits. Such actions include, in order of priority:
 - 1) Eliminating the source of the exposure.
 - 2) Engineering design modifications.
 - 3) Administrative controls, including work practices.
 - 4) Use of personal protective equipment.
 - 5) Removal of employees from the work area when adequate protection cannot be provided.
 - h. Contractor exposure monitoring records shall be maintained by contractors and the Solutia Representative in accordance with governmental retention requirements. Such records shall contain the following information:
 - 1) Employee or work area monitored.
 - 2) Conditions, such as, normal operating conditions, shutdown or emergency situations, and type of work.
 - 3) Personal protective equipment used.
 - 4) Sampling and analytical methodology used.
 - 5) Exposure conditions measured and duration of exposure.
 - 6) Applicable governmental requirements and/or internal exposure limits in effect at the time of the sampling.
 - i. New or modified contractor facilities and equipment shall be designed to achieve compliance with governmental (ACGIH) and Solutia requirements. Consideration shall be given to the feasibility of achieving the lowest possible employee

exposure levels for identified work place health hazards.

Site Requirement *6.6.0

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5.0 - Contractor/Guest ES&H Guidelines

5.6.2 Hearing Conservation

5.6.2.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1910.95, "Occupational Noise Exposure", *1926.52, "Occupational Noise Exposure", and *1926.101, "Hearing Protection".

5.6.2.1 General Requirements

- a. Hearing protection for employees is required where noise levels exceed 90 DBA or 85 DBA time-weighted average.
- b. Contractors shall comply with all location hearing protection requirements.
- c. Contractors shall have written hearing conservation programs which identify the following:
 - 1) The person responsible for administering the program and any other groups involved and their roles.
 - 2) Criteria for selecting the worker population.
 - 3) Equipment calibration procedures.
 - 4) Audiometric testing.
 - 5) Documentation of testing results and notification of employees within 21 days.
 - 6) Re-evaluation of the work environment when a confirmed Standard Threshold Shift in the hearing level of an employee occurs and documentation of the retraining of employees.
 - 7) Training program and documentation.

- 8) Noise areas that require the use of hearing protectors.
- 9) Warning signs posted where levels exceed 90 DBA or 85 DBA time-weighted average.

5.6.2.2 Training Requirements

- a. Employees shall be trained in the use and care of hearing protectors.. Reference 29 CFR*1910.95(i)(4).
 - 1) The effect of noise on hearing.
 - 2) The purpose of hearing protection.
 - A. Advantages and disadvantages
 - B. Attenuation of various types
 - C. Instructions in selection, fitting, use and care
 - 3) The purpose of audiometric testing and an explanation of the test procedures.

Site Requirement *6.6.2

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5.0 - Contractor/Guest ES&H Guidelines

5.6.3 Respiratory Protection

5.6.3.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR*1910.134, "Respiratory Protection", *1926.103, "Respiratory Protection", and ANSI Z88.2, "Practices for Respiratory Protection".

5.6.3.1 General Requirements

- a. Contractors shall comply with all location respiratory protection requirements.
- b. Contractors shall have a written program that includes the following:
 - 1) Program administration.
 - 2) Equipment selection based on hazard.
 - 3) Training on use and limitation of each kind of respirator to be used.
 - 4) Cleaning and disinfecting procedures.
 - 5) Equipment storage procedures.
 - 6) Equipment inspection and maintenance procedures.
 - 7) Employee exposure monitoring to support selection.
 - 8) Program auditing procedures.
 - 9) Medical review procedures.
 - 10) Equipment fit testing procedures.

- 14) Breathing air testing.
- 12) Breathing air system maintenance.
- c. Contractors shall provide all required respiratory protection equipment and related services unless otherwise agreed upon.
- d. Employees required to wear respirators shall be certified as medically fit to wear a respirator.
- e. Employees required to wear respirators shall be fit tested at least annually.
- f. When breathing air is used, it shall be classified as Grade D as specified in the Compressed Gas Association Specification G-7.1-1966.

5.6.3.2 Training Requirements

- a. Employees required to use respiratory protective equipment shall be trained in the use and limitations of such equipment. Reference 29 CFR*1910.134(b)(3) and *1926.103(a)(1).

Site Requirement *6.6.3

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5.0 - Contractor/Guest ES&H Guidelines

5.6.4 Hazard Communication

5.6.4.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR*1910.1200, "Hazard Communication", and *1926.59, "Hazard Communication".

5.6.4.1 General Requirements

- a. Contractors shall have a written hazard communication program and shall inform their employees of the location and availability of the program. The program shall include:
 - 1) A list of hazardous chemicals to which employees may be exposed.
 - 2) Potentially significant health hazards which would result from exposure to the hazardous chemicals.
 - 3) Appropriate precautionary measures to protect against adverse health effects.
 - 4) Actions to be taken in response to emergency situations.
- b. Materials shall be labeled consistently and have the appropriate hazard warning; the name on the label shall be the same as that in the hazardous communication program and on the material safety data sheet.
- c. Contractors shall identify, to their employees and to the Solutia Representative, the administrator of their hazards communication programs.
- d. Contractors shall train their employees on the physical, chemical and biological agents in the workplace.
- e. The Solutia Representative will provide contractors all material safety data sheets for Solutia materials that are present on the location.

- f. Contractors shall provide to the Solutia Representative all material safety data sheets for materials that they bring onto the location.

5.6.4.2 Training Requirements

- a. Employees shall be provided with information and training in hazardous chemicals in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area. Reference 29 CFR*1910.1200(h)(2) and *1926.59(h).

Site Requirement *6.6.4

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5.7.0 Vehicle Safety

5.7.0.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1910.178, "Powered Industrial Trucks", and Subpart *1926.O, "Motor Vehicles, Mechanized Equipment and Marine Operations".

5.7.0.1 General Requirements

- a. Contractors shall comply with all location vehicle safety requirements.
- b. Contractor employees shall park their personal vehicles only in those areas designated by the Solutia Representative. Solutia assumes no responsibility for vehicles, or articles in vehicles, parked on Solutia property.
- c. Only vehicles required for the work will be permitted inside the location.
 - 1) All traffic regulations and signs, including railroad crossing and switch signs, shall be obeyed.
 - 2) All vehicles are subject to inspection when entering or leaving the location.
- d. A stipulation may be placed on the number of vehicles contractors may operate inside the location.
- e. All vehicles to be used shall be checked at the beginning of each shift to assure that all parts, equipment and accessories that affect safe operation are in proper operating condition and free from defects. All defects shall be corrected before the vehicle is placed in service. Reference 29 CFR*1926.601(b)(14).
- f. Contractors shall not use any motor vehicle, earth moving or compacting equipment having an obstructed view to the rear unless the vehicle has a reverse signal alarm distinguishable from the surrounding noise level.

Reference 29 CFR*1926.601(b)(4).

- g. Vehicles shall not be left running while unattended.
- h. Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried. Reference 29 CFR*1926.601(b)(8)
- i. In the event of a location emergency alarm, vehicles shall be pulled over to the side of the road and their engines switched off.

5.7.0.2 Training Requirements

- a. Contractors training programs for safe operation of vehicles, such as, automobiles, pickup trucks, vans, etc., shall require as a minimum:
 - 1) The operator to have a valid drivers license.
 - 2) Seat belts to be used by all persons in the vehicle.
 - 3) Driver to be responsible for the safety of all passengers.

Site Requirement *6.7.0

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5.0 - Contractor/Guest ES&H Guidelines

5.7.1 Cranes and Hoisting Equipment

5.7.1.0 Governmental Requirements

- a. Contractors shall comply with all requirements of 29 CFR *1910.180, "Crawler, Locomotive and Truck Cranes", *1926.550, "Cranes and Derricks", and ANSI B30.5, "Mobile and Locomotive and Truck Cranes".

5.7.1.1 General Requirements

- a. Contractors shall operate and maintain cranes and hoisting equipment in accordance with equipment manufacturers specifications and limitations applicable to its operation.
- b. Contractor cranes and hoisting equipment shall be maintained and inspected in accordance with the requirements specified in 29 CFR*1926.550(a) and *1910.180(d).
 - 1) Cranes and hoisting equipment shall be inspected by a competent person prior to each use, and during use, to make sure it is in safe operating condition. Deficiencies shall be repaired, or defective parts replaced, before continued use. Reference 29 CFR *1926.550(a)(5).
 - 2) A thorough, annual inspection of hoisting equipment shall be made by a competent person, or by a government or private agency recognized by the U. S. Department of Labor. Reference 29 CFR*1926.550(a)(6).
- c. Riding of crane hooks and headache balls is prohibited. Reference 29 CFR*1910.180(h)(3)(v).
- d. Outriggers must be fully extended and pedestals lowered for any lift. Reference 29 CFR*1910.180(h)(3)(ix).
- e. When making a lift with a crane:
 - 1) One person shall be designated to supervise the lift.

- 2) Only one person, knowledgeable in the standard crane signals, shall be designated to perform signalling.
- 3) The crane operator and the signalman shall maintain continuous visual contact during the lifting operations.
- 4) The area shall be cleared, roped or barricaded off.
- 5) No one shall stand or pass under suspended loads. Reference 29 CFR*1910.180(h)(4)(ii).
- 6) Tag lines shall be used for controlling loads.

f. Contractors shall comply with location procedures for critical lifts. These procedures address such hazards as lifts over process equipment, heavy lifts (10 tons or more), etc. Contractors shall provide a documented lift plan for all critical lifts, and this plan shall be reviewed and approved by the Solutia Representative prior to initiating a critical lift.

- 1) Rigging equipment shall be certified and inspected by qualified state, manufacturer or owner representatives prior to use, and as necessary during its use, to ensure that it is safe.

g. Contractors shall operate cranes near overhead suspended power lines in accordance with location requirements, and, as a minimum, meet the requirements listed below. Where a location approved variance is in place, contractor work may be performed under the variance.

- 1) This procedure applies to overhead suspended electrical power lines which exceed 150 volts to ground that are insulated or uninsulated. This procedure does not apply to power lines protected in cable tray, armor or conduit.
- 2) Contractor shall complete a pre-job plan prior to transporting, positioning or operating a crane or hoisting equipment in the vicinity of power lines.
- 3) Contractors are prohibited from operating cranes or hoisting equipment near power lines unless:
 - A. The line is de-energized, tagged, locked out and grounded [Reference 29 CFR*1926.550(a)(15)] or
 - B. The crane is positioned and operated such that when near uninsulated power lines, neither the boom (fully extended hydraulic) nor any part

of the load line or load can, under any situation, be maneuvered to or fall within 10 feet of lines rated 150 volts to 50 KV or 10 feet plus 0.4 inches each KV over 50 KV. Reference 29 CFR *1926.550(a)(15)(i) and (ii).

- 4) Whenever a crane, boom truck or other similar lifting equipment is in transit with no load and with boom lowered, equipment clearances shall be [Reference 29 CFR*1926.550(a)(15)(iii)]:

- A. A minimum of four feet for voltages of 150 volts up to 50 KV,
- B. 10 feet if the voltage is greater than 50 KV up to and including 345 KV,
- C. 16 feet if the voltage is greater than 345 KV up to and including 750 KV.
- D. A qualified person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
- E. Power lines passing over roadways or crane thoroughfares shall be marked by signs identifying the safe maximum allowable vehicle height. Reference 29 CFR*1926.550(a)(15)(iv).

- 5) Contractor supervisors, operators and support personnel shall be knowledgeable in this procedure and the hazards of using hoisting equipment near electrical power lines.

h. Cranes and derricks shall not be refueled while in operation. Reference 29 CFR*1910.180(i)(4)(ii).

i. Cranes and derricks not in use shall be properly secured.

- 1) Hydraulic booms shall be retracted.
- 2) Whip lines shall be secured.
- 3) [The crane operator must remain in the cab at all time if the crane is running (or at the controls when a remote is used.)]
- 4) [Any exception to this guideline must be approved by the CMR III. This exception must be submitted in writing stating the reason for the

exception and a listing of management controls implemented to ensure that the crane and its operating system are secure before the operator leaves the cab/controls.]

- j. Contractors shall use crane suspended personnel platforms in accordance with 29 CFR*1926.550(g), "Crane and Derrick Suspended Personnel Platforms" and location procedures for crane suspended personnel platforms.
 - 1) The Solutia Representative shall approve in writing all use of crane suspended personnel platforms by contractors. See Requirements *5.1.2, "MANAGEMENT OF CHANGE", and *5.5.8, "AERIAL LIFTS".
- k. Rated load capacities and recommended operating speeds, special hazard warnings or instruction, shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator while he/she is at his/her control station. Reference 29 CFR*1926.550(a)(2).
- l. Hand signals to crane and derrick operators shall be those prescribed by the applicable ANSI standard for the type of crane in use. An illustration of the signals shall be posted at the job location. Reference 29 CFR*1926.550(a)(4).
- m. Accessible areas within the swing radius of the rear of the rotating superstructure of the crane, either permanently or temporarily mounted, shall be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane. Reference 29CFR*1926.550(a)(9). See Requirement *5.5.9, "FALL PROTECTION".

5.7.1.2 Training Requirements

- a. Operators of crane, derricks and hoisting equipment shall be trained and qualified in the safe operation of the equipment.

Site Requirement *6.7.1

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5.0 - Contractor/Guest ES&H Guidelines

5.7.3 Mobile/Powered Construction Equipment

5.7.3 Mobile/Powered Construction Equipment

5.7.3.0 GOVERNMENT REQUIREMENTS

- a. Contractors shall comply with 29CFR 1926.601 "Motor Vehicles," 29CFR 1926.601 "Material Handling Equipment," 29CFR 1926.1000 Rollover Protective Structures(ROPS) for material handling equipment, and 29CFR 1926.556 "Aerial Lifts."

5.7.3.1 GENERAL REQUIREMENTS

- a. Earth-moving/material handling machinery shall be designed and equipped with rollover protective structures which meet minimum protective standards prescribed in CFR 1926.1000.
- b. All earth-moving equipment shall have a service braking system capable of stopping and holding the equipment fully loaded as specified by the Society of Automotive Engineers.
Reference CFR 1926.602(a)(4).
- c. All bi-directional machines, such as rollers, compactors, front-end loaders, bulldozers, and similar equipment shall be equipped with a horn, distinguishable from the surrounding noise levels, which shall be operated as needed when the machine is moving in either direction.
Reference CFR 1926.602(a)(9)(i).
- d. Lift trucks, stackers, etc. shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator.
Reference 29CFR 1926.602(c)(1)(i).
- e. No employees shall use any motor vehicle equipment having an obstructed view to the rear unless:
 - 1. The vehicle has a reverse signal alarm audible above the surrounding noise level, or

2. The vehicle is backed up only when an observer signals it is safe to do so. Reference 29CFR 1926.601(b)(4).
- f. All mobile/powered construction equipment shall be equipped with a fire extinguisher as required by OSHA or per location requirements.
- g. All vehicles in use shall be checked at the beginning of each shift for the safe operation of components such as fire extinguishers, steering mechanisms, service brakes, horns, coupling devices, operating control and other safety devices. Reference CFR 1926.601(b)(14).
- h. For extensible and articulating boom platforms:
 1. Lift controls shall be operator tested daily and/or before each use.
 2. A full body harness shall be worn with lanyard attached to the lift basket when working from an aerial lift.
 3. Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
Reference CFR 1926.556(b)(I)(II)(IV)(V).
 4. Aerial lifts shall not be used to transport construction/maintenance materials.
- i. Under no circumstances shall a powered machine be refuelled while the engine is operating.
- j. When noise level of the equipment is greater than location requirements, hearing protection shall be used. See Requirement 5.6.2 "Hearing Conservation".
- k. All mobile and/or powered equipment used shall follow manufacturer's specifications and safety guidelines.
- l. Trailers used to transport mobile/powered construction equipment shall be inspected by a knowledgeable person prior to each use. Fully loaded equipment transporting trailers shall not exceed the design load rating capacity.

5.7.3.2 TRAINING REQUIREMENTS

- a. Employees shall be trained in the safe operation and recognition of hazards associated with mobile/powered construction equipment.
- b. All equipment operators shall be certified by a competent person having experience in the training of equipment operators and safety maintenance of equipment.

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5.0 - Contractor/Guest ES&H Guidelines

5.8.0 Waste Management

5.8.0.0 Governmental Requirements

- a. Contractors shall comply with the requirements of 29 CFR *1910.120, "Hazardous Waste Operations and Emergency Response".

5.8.0.1 General Requirements

- a. Contractors shall have a waste management policy that assures that they do not adversely affect the health or safety of contractor employees, Management location employees and the public, or affect the environment.
- b. Contractors shall identify, treat, store and handle waste consistent with Environmental Protection Agency regulations, state regulations and location procedures.
- c. Waste generated on location shall be disposed of as approved by the Solutia Representative. Sanitary waste, construction debris and other material that is not contaminated shall be disposed of by contractors in accordance with applicable governmental requirements. See Requirement *5.3.1, "BASIC ENVIRONMENTAL, SAFETY AND HEALTH RULES".
- d. Contractors who perform work where hazardous waste is present shall comply with location hazardous waste operations procedures and 29 CFR*1910.120, "Hazardous Waste Operations and Emergency Response".

5.8.0.2 Training Requirements

- a. Only employees who are trained in accordance with 29 CFR *1910.120 may engage in clean-up operations in response to an incident or emergency situation involving hazardous waste.

Definitions

Waste: All (1) garbage, refuse, sludge, sand from sand-blasting operations, dirt from excavations, personal protective equipment which will not be reused and any other material to be discarded, which resulted from construction, industrial, commercial, mining or agricultural operations (excluding air emissions); and (2) any waste-like material that is reused, recycled, reclaimed or burned for energy recovery and is subject to governmental waste management regulation.

Site Requirement *6.8.0

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5.0 - Contractor/Guest ES&H Guidelines

5.8.1 Ground and Surface Water Protection

5.8.1.0 General Requirements

- a. Contractor operations shall not have an adverse effect on ground or surface water.
- b. Contractors shall take measures to avoid spills and releases. Contractors shall have a written plan to contain and clean up any spills. In the event of a spill or release, contractors shall take immediate measures to report it and contain it, as specified by the Solutia Representative.

Definitions

Ground water: Water below land surface in a zone of saturation.

Surface water: Flowing and standing water on land surface. Water contained within impoundments and other location facilities is excluded.

Adverse effect on ground water: An effect that significantly impairs the current or any reasonably anticipated use of ground water.

Adverse effect on surface water: An effect that significantly impairs the current or any reasonably anticipated use of surface water.

Site Requirement *6.8.1

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5.0 - Contractor/Guest ES&H Guidelines

5.9.0 Occupational Medicine

5.9.0.0 Governmental Requirements

- a. Contractor shall comply with the requirements of 29 CFR *1910.15 and *1926.50, "Medical Services and First Aid".
- b. Contractors shall provide employee access to his or her personal medical records in accordance with the provisions of 29 CFR*1910.20, "Access to Employee Exposure and Medical Records".

5.9.0.1 General Requirements

- a. Contractors shall ensure the ready availability of medical personnel for advice and consultation on matters of employee health. Reference 29 CFR*1926.50(a).
- b. Contractors shall provide for medical services which can evaluate and maintain the health of their employees in accordance with applicable governmental requirements.
- c. A person, or persons, trained to render first aid and cardiopulmonary resuscitation (CPR) shall be provided. First aid supplies approved by contractors medical consultants shall be readily available. Reference 29 CFR*1926.50(c) and (d).
- d. Contractors shall make appropriate arrangements to ensure that prompt medical treatment is provided for all occupational injuries and illnesses. Reference 29 CFR *1926.50(b).
- e. Equipment shall be provided within the work area for quick drenching or flushing of the eyes and body for immediate emergency use if accidental exposure to corrosive materials occurs.
- f. Contractors shall maintain a log of all first aid rendered and all medical treatment of occupational injuries and illnesses. See Requirement *5.3.5, "INJURY AND ILLNESS RECORDKEEPING".

- g. Contractors shall provide the Solutia Representative with a copy of written procedures describing the content and delivery of medical services to their employees, including:
 - 1) The name of the provider of the services.
 - 2) The professional qualifications and licensure status of the provider and staff.
 - 3) Medical surveillance required by governmental regulations and standards and as required by Solutia.
- h. Contractors shall provide applicable health and safety examinations for employees.
- i. Contractors shall monitor their employees exposure to chemical agents and physical stresses to ensure compliance with governmental medical surveillance requirements. When Solutia chemicals or agents are involved in contractors work, the Solutia Representative will provide assistance in complying with medical surveillance requirements.
- j. Contractors shall identify potential health hazards and offer medical surveillance examinations to employees as required by governmental requirements.
See Requirement *5.6.0, "OCCUPATIONAL HEALTH/WORKPLACE EXPOSURE MONITORING".
- k. Contractors shall medically evaluate employees on return to work after an occupational injury or illness that occurred at a location. A physicians written opinion shall be obtained on the ability of the person to safely resume his or her designated duties.
- l. The location will provide emergency response and arrange transport to contractor employees as specified by the Solutia Representative.
- m. By prior arrangement with contractors, location management may authorize location medical personnel to provide non-emergency medical treatment to contractor employees to enable such employees to remain at work without interruption and time loss. All occupational injuries and illnesses dealt with in this manner shall be recorded by contractors in their medical logs.
- n. When the contractor is a self-employed person (individual consultant), or is an employee of an employment agency who is assigned to duties on the location without supervision (for example clerks, temporary secretaries and laboratory technicians), the location will provide first aid or emergency medical treatment for all occupational injuries and illness.
 - 1) If the individual is assigned to duties which require mandatory medical clearance (for example use of hearing protection, respirators, etc.) or

where medical surveillance is offered to comply with governmental regulations or standards, the location medical personnel will conduct such examinations and advise location management of any restrictions which apply.

5.9.0.2 Medical Services

- a. The listing below includes chemical/physical agents and situations for which occupational health surveillance is presently required. This listing could be changed periodically as appropriate by the Solutia Department of Medical and Health Sciences (DMHS). This surveillance may be required by regulation and therefore legally mandated. In addition, there are exposures for which no legally enacted standard mandates surveillance, but for which Solutia requires periodic health evaluation. Occupational health surveillance is targeted to specific at-risk groups as by workplace assignment, known exposure history and/or workplace monitoring data and conducted by performing certain specific health examinations to include the following:

- | | |
|---|---|
| 1) Acrylonitrile | 9) Hearing Protection Required |
| 2) Asbestos | 10) Lead |
| 3) Blood-borne Pathogens | 11) Methemoglobin Formers |
| 4) Benzene | 12) Phosphorus |
| 5) Cadmium | 13) Radiation |
| 6) DMAC | 14) Respiratory Protection Required |
| 7) Formaldehyde Required | 15) Uncharacterized Workplace Exposures |
| 8) Hazardous Substances Emergency Response | |

- b. Pre-placement health examinations shall be provided for contractor employees who are employed in jobs for which Solutia required/legally mandated health examination would be performed for its full-time employees (if they were to perform the job) and who:

- 1) Are, or may, be potentially exposed at or above the action level (i.e., one-half the eight-hour time-weighted average permissible exposure limit or Solutia workplace exposure guideline) to a chemical/physical agent and situations as identified

- 2) Are anticipated to work in a designated exposure area for 30 or more consecutive work days or where non-consecutive work periods may result in sufficient cumulative work exposure to warrant evaluation. Such work evaluations will be conducted by Solutia Industrial Hygiene in consultation with Occupational Medicine, DMHS, as to what constitutes sufficient cumulative work exposure; or
- 3) Regardless of work duration, are assigned to a job for which Industrial Hygiene, in consultation with Occupational Medicine, determines sufficient potential exposure to require health examinations.
- 4) When there is any question as to whether or not the job assignment requires special health surveillance or any question as to the specifics of the health examination, Occupational Medicine, DMHS, is to be consulted and is the final authority.

- c. This section will not normally apply to construction contractors unless the work is directly associated with an active chemical processing area.
- d. This section is not intended to apply to potential exposures which might result from possible catastrophic events not reasonably foreseeable.
- e. Where "baseline" medical data on contractor employees are required prior to working in area, sufficient lead-time for collection and analysis of samples is required in scheduling work.
- f. Examinations are to be performed by qualified healthcare professionals. Examination may be performed by healthcare professionals, identified by contractors, who meet the approval of Solutia.

- 1) Surveillance health examinations for contractor employees shall follow as closely as possible the examinations as defined for Solutia employees.
- 2) Periodic and exit physicals for contractor employees shall be in accordance with the same frequency/ timing practices provided for Solutia employees similar situated.

- g. Maintenance and storage of medical record information on contractor employees will be at the discretion of the location and will follow the same policies regarding confidentiality

an retention as for Solutia employees. In all cases, whether the examination is performed on or off location, a copy is to be accessible to Solutia medical personnel or be maintained by Solutia in the same area as the medical records for that location are maintained. Where feasible, Solutia forms are to be used.

Site Requirement *6.9.0

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5.0 - Contractor/Guest ES&H Guidelines

5.9.1 Substance Detection

5.9.1.0 General Requirements

- a. Contractors shall comply with the location substance abuse policy.
- b. Contractors shall have a documented program to assure that contract employees who work on Solutia property are not impaired due to alcohol, drugs or other substances.
- c. In the event contractors are unable to provide either initial verification of drug-free employees or on-going random testing, the Solutia Representative may arrange for such services by or through Solutia, but at the contractors expense.
- d. Contractors shall provide the Solutia Representative with a summary of testing data on request.
- e. When an employee tests positive for substance impairment in random testing, contractors shall:
 - 1) Inform the Solutia Representative.
 - 2) Immediately remove the employee from the location.
- f. An employee who has tested positive for substance impairment shall not be allowed to return to any Solutia location until the Solutia Representative has been provided verification and documentation that the employee has successfully completed a recognized substance abuse rehabilitation program.

Site Requirement *6.9.1

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